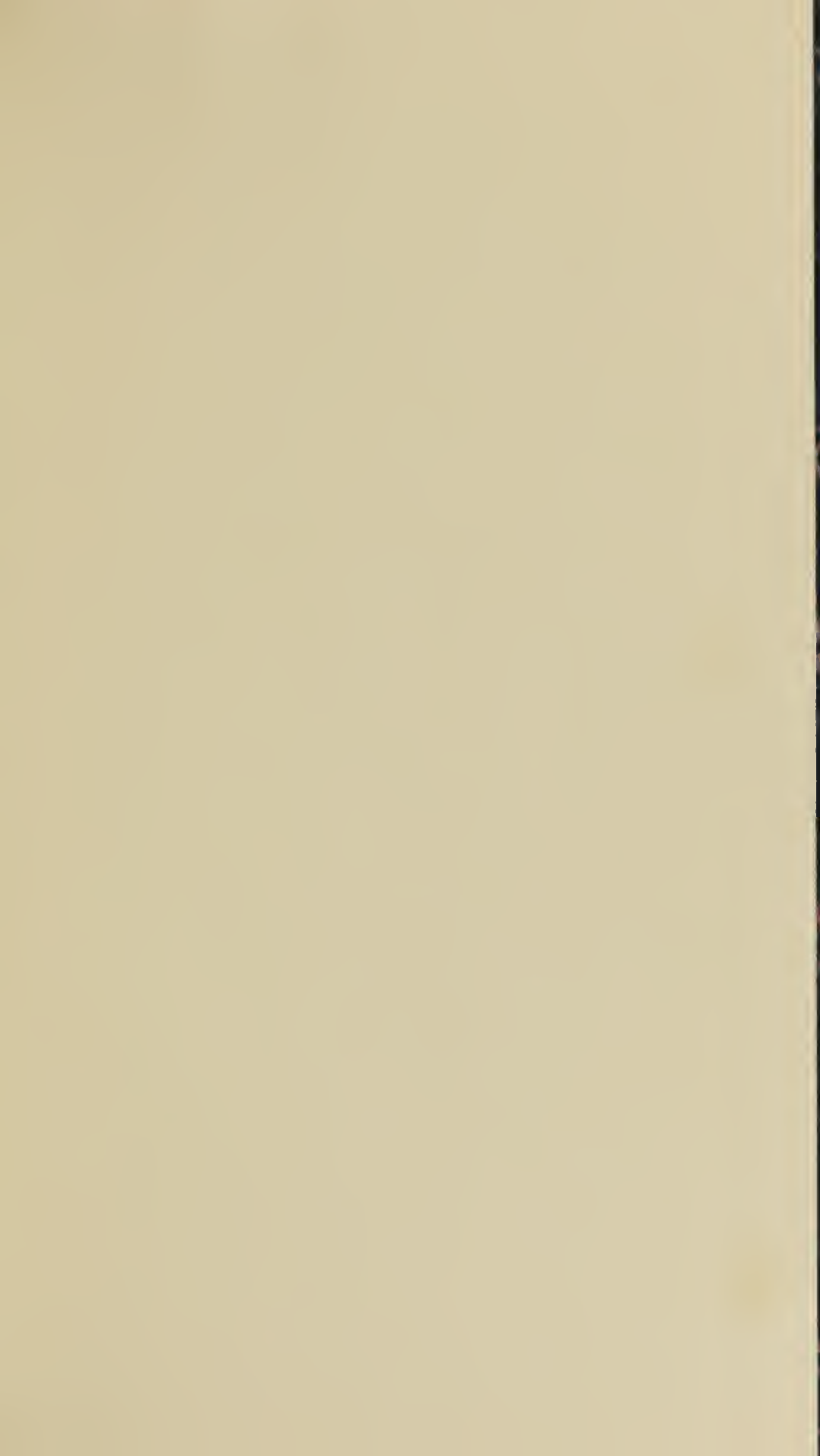


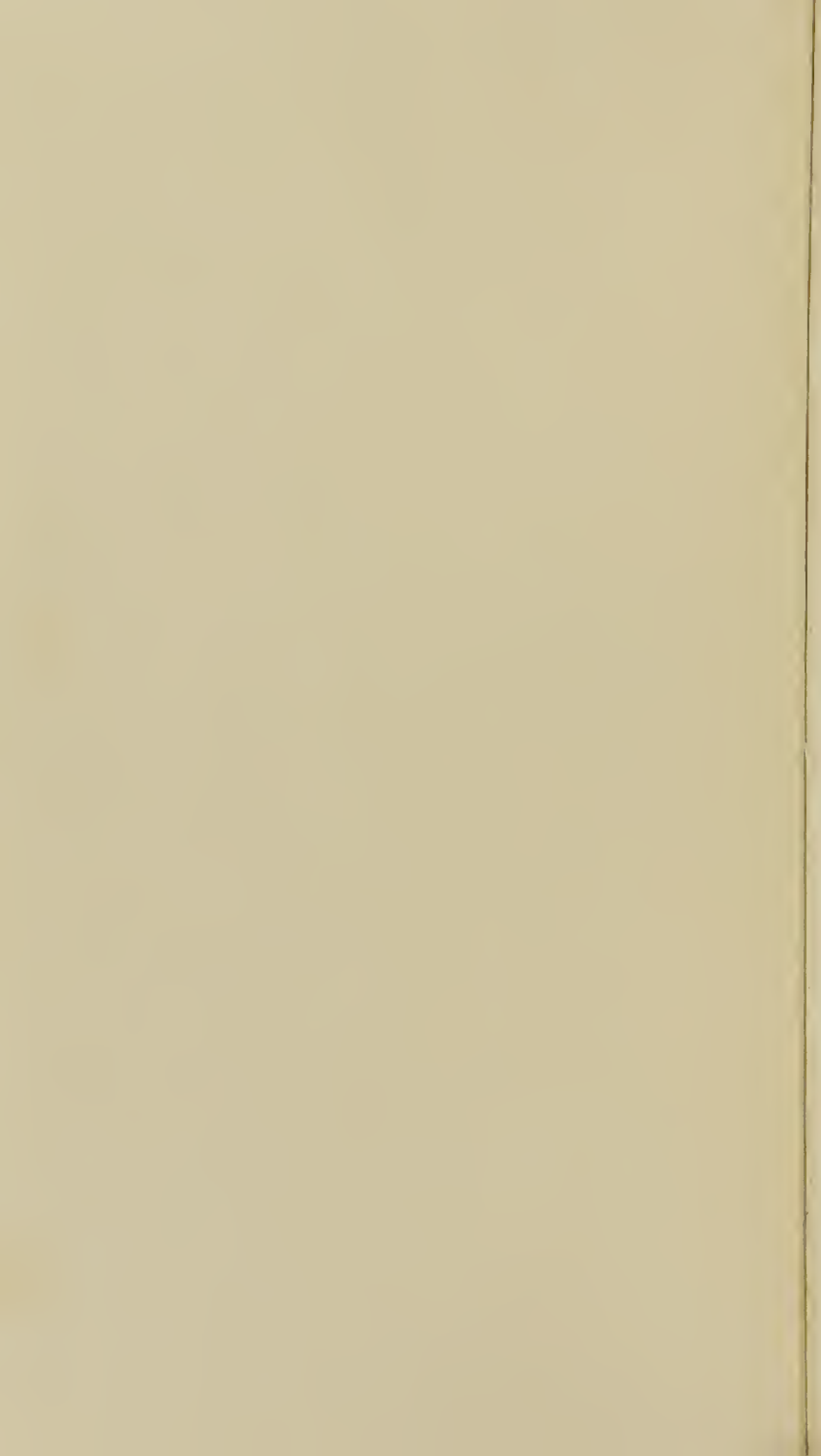
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A N
INAUGURAL DISSERTATION
ON THE
M E A S L E S.

SUBMITTED TO THE EXAMINATION
OF THE
Rev. WILLIAM LINN, D. D. P. T. President;
AND OF THE
TRUSTEES AND FACULTY
OF
QUEEN'S COLLEGE, NEW-JERSEY;
FOR THE DEGREE OF
DOCTOR of MEDICINE,
WITH THE RIGHTS AND IMMUNITIES THEREUNTO
APPERTAINING.

BY CHARLES BUXTON,
OF NEW-YORK.

QUE PRÆSENTI OPUSCULO DESUNT, SUPPLEAT ÆTAS.

DAN.

21935

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TO

DoCTOR JOHN BARD,

*Whose Reputation as a Practitioner stands
eminently distinguished;*

AND,

*Who unites in the Character of a Physician,
every Accomplishment which can adorn
the Gentleman :*

This DISSERTATION

Is respectfully inscribed,

In Testimony

*of the high Esteem and grateful Acknowledgment of
his obedient humble Servant,*

CHARLES BUXTON.

INSTRUMENT OF DEED

1871-1872

Under the authority of the State of New York, I, the undersigned, do hereby certify that the within and foregoing is a true and correct copy of the original of the same, as the same appears from the records of the Office of the Recorder of Deeds, in and for the County of New York, at the City of New York, this 1st day of January, 1872.

IN WITNESS WHEREOF, I have hereunto set my hand and the seal of the Office of the Recorder of Deeds, at the City of New York, this 1st day of January, 1872.

RECORDED

A N

INAUGURAL DISSERTATION

O N T H E

M E A S L E S.

UPON reflecting on the variety of distressing diseases to which our fellow creatures are daily exposed, from unknown causes, we are led by nature, irresistibly, from their great importance to ourselves, to investigate the sources from whence they arise, and trace their effects by gradation.

Unfortunately for the science of Medicine, the result of these inquiries has in all ages proved, in a great measure, unsatisfactory. In no class of diseases perhaps, has this been more notorious than in the contagious, though frequently of the highest consequence, from the great mortality often induced by its rage. From these considerations, I feel an inclination to choose for the subject of my Dissertation, one of those diseases that are frequently epidemic; not from any desire of appearing as an author, but principally in compliance with the rules

rules prescribed in this University, to candidates for its honours. It is therefore, taken for granted, that every liberal person who may favour these sheets with a perusal, will freely pass over any imperfections that may be noticed; especially as some opinions may be advanced, on which Physicians are considerably divided.

DEFINITION AND HISTORY.

THE most accurate definition of this disease, is that which has been delivered to us by the illustrious CULLEN, in the following words.*---

Synocha contagiosa, cum sternutatione, epiphora, et tussi sicca rauca.

Quarto die, vel paulo serius, erumpunt papulæ exiguæ, confertæ vix eminentes, et post tres dies in squamulas furfuraceas minimas abeuntes.

The first accounts of this disease, like those of the small-pox, have been handed down to us by the Arabian Physicians: it has been particularly described by RHazes, who observes, that the contagion first appeared in Egypt about the year 580, and spread its baneful influence into Asia, from whence it became imported into Europe and America. By the indefatigable industry of SYDENHAM, we have been favoured with the history of this disease, as it appeared epidemically in England in

* Vide Nosologiæ Methodicæ, C. Pyrexia, O. Exanthemata, G. xxx. Rubcola.

in the years 1670, 1673 and 1674; and what is somewhat surprising, we are told, by the learned Doctor MORTON, of the dreadful mortality attendant on it in the year 1672, which is not even mentioned, to the best of my recollection, by SYDENHAM; though, to adopt Doctor MORTON's language, it raged like unto a mild kind of plague, from whose malignancy neither age nor sex were exempt.*

The morbillious fever generally makes it appearance in that season of the year which seems, from concurring circumstances, best calculated to promote the susceptibility of the human body to imbibe the contagious matter.† Hence it is supposed most common in the month of January, when the cold is pretty severe.‡ In the city of New-York it prevailed as an epidemic in the months of November and December, 1788, and January, 1789; and is known to have raged at Plymouth in the months of July, August, September and October, 1745.§

Its appearance however, in these months, may be looked on as an exception to our general rule; but it is absolutely necessary, in our investigation of this disease, to make that distinction which is here as strongly painted by nature as in the small-pox. I would then, on the present occasion, divide the disease into two species,

* At locum dedit MORBILLIS EPIDEMIIS, qui ad instar pestis mitioris, nulli sexui vel ætati parcentes, adeo mensibus, anni 1672. Vide MORTON Exercitationes, &c. Appen. p. 427.

† For a description of our climate I would refer the reader to the ingenious observations in the MEDICAL ENQUIRIES of Doctor RUSH; as, in my opinion, they contain many remarks applicable to this state.

‡ Vide HOME's Principia Medicinæ—CULLEN's Practice.

§ Vide HUXHAM DE MORBIS EPIDEMICIS, vol. ii. p. 537.

cies, the *Febris morbillosa benigna*, and the second species, so faithfully related by authors of the highest estimation, *Febris morbillosa maligna*.*

We shall now proceed to describe the first species, viz.

THE FEBRIS MORBILLOSA BENIGNA.

The first symptom, or sensation of indisposition observed by the patient, is the same here as in the beginning of fevers in general; that is, he feels uncomfortably chilled and trembling, alternated by flushes of heat, which increasing the uneasiness, is soon succeeded by a constant and intense fever, with this difference, that in this disease the patient is always more or less affected with hoarseness, and in some instances with a pretty dry, sharp cough† for ten or even fifteen days before the fever, with considerable difficulty of respiration.---The tongue exhibits no change on the first day, except being rather whitened; the eye-lids a little inflamed, with an increased flux of tears that flow down the cheeks, attended with a desire of rest.

These are the general appearances which the eruptive fever puts on for the first two days, after which period they gradually increase in violence; particularly, the function of respiration is more obstructed; the soreness and inflammation of the eyes increase; the thirst in many becomes almost insupportable, attended with great anxiety and languor.

‘ In infants, a looseness often occurs a short time before the eruption.

The

* Doctor WATSON's paper in the Lond. Med. Observ. vol. iv. art. xi.

† Vide HOFFMAN.

The symptoms continue to grow more violent till near the fourth day, sometimes a few hours longer, when the face looks somewhat swelled and fresh-coloured; at the same time a number of little spots or specks become visible, which grow in size till many run into one another, producing a variety of confluent figures.

The eruptions on the face being thus completed, the neck, arms and breast, with the other parts of the body, become successively attacked. I have seen one or two instances where these eruptions have been first noticed on the breast; but here I could not observe the pimples to be so conspicuous as they are commonly found to be on the face, presenting merely a bright red colour.* As soon as the eruption is finished, we find ourselves disappointed; for though the symptoms are not aggravated, they remain in a great degree unabated, except the sickness at stomach and vomiting: yet the cough, fever and difficulty of breathing are not unfrequently exasperated: when this happens, the drowfiness, loss of appetite, flow of tears to the eyes, all continue till about the sixth day, when the countenance changes its appearance by a roughness of the skin; this continuing two days, they disappear, and are soon followed by the eruptions on the other parts of the body in succession.

About the ninth day the skin scales off, leaving the body as if dusted over with some farinaceous powder, which is often followed by an itchy sensation.

B

The

* SYD. de Morbillis, anni 1670.

The cough here too frequently remains, and that very troublesome; attended often with symptoms of an affected breast, at other times with a diarrhœa.

The ninth day often proves fatal to such infants as have laboured under severe catarrhal symptoms.

“ Nono plerumque die suffocantur infantes, ex nimio feri acris affluxu.”

FEBRIS MORBILLOSA MALIGNA.

WE now come to the consideration of the *malignant*, as a *distinct species*, which may be done with the greatest propriety; for I am of opinion, that there can be no such disease as that which CULLEN notes as his second species, on the authority of SAUVAGE,* which I hope satisfactorily to prove when I come to speak on the causes.

On the authority of the celebrated WATSON, and other respectable gentlemen, we have been induced to make this natural subdivision.† The symptoms which WATSON relates evince themselves, first, by inflamed watery eyes, cough, and universal debility, succeeded generally by restless nights.---“ On the next day the fever usually rose to a considerable height, attended with pain and heaviness in the head, at which time the eruptions appeared, so that most frequently on the second day the measles were visible on most parts of the body; the
cough

* Rubeola (variolodes) papulis discretis eminentibus.

† Doctor WATSON. Lond. Med. Observ. vol. iv. art. xi. Vide Diss. Med. Inaug. auctore JAC. W. ROBERTS. MORTON's Appendix de Morb. Epidemici.

cough and inflamed eyes grew worse: the patient now complained of great heat, oppression, and restlessness: the breathing was generally difficult, with no expectoration; the skin was usually dry, the *fauces* of a deep red colour, and the tongue most frequently foul: the thirst was great; the pulse was very quick, but seldom full; and they complained of great weakness. The eruption, heat, and inflammatory symptoms continued in the manner just now mentioned, more or less, according to the severity of the disease, four or five days, and then went off; in some instances they continued a few days longer, but in the greater number, the eruptions were gone at the end of the fourth day. This I consider as the first stage of the disease.

“ The second, or last stage of the malignant measles, began after the febrile heat was over, and the eruptions had disappeared. The watery eyes in many were now turned into a grievous soreness in that organ, which lasted in some a considerable time. The cough, oppression, and difficulty of breathing continued equally severe, and sometimes more so than during the eruption, attended with great restlessness and anxiety, with scarce any expectoration: the thirst was abated; the pulse was quick, but low, and frequently irregular; the debility in many was extreme, especially at this period if the patient was teased with purging stools. By this time they were greatly reduced in their flesh. If in this state a delirium came on, it generally indicated that death was not far off.”

On

On the above species of measles, we are presented with some remarks by Doctor J. W. ROBERTS, in his Inaugural Differtation at Edinburgh, in 1786, where he mentions its appearance in the island of Antigua, in 1782:---That the sick, on the second day, had the pulse more full and frequent, with great weariness of the body, and a visible degree of inflammation about the tonsils; others had the eruption on this day: about the fourth day, the inflammatory symptoms subsiding, were followed by the most alarming appearances, attended with a low, weak pulse, and generally went through a similar course with that already quoted from Doctor WATSON.

C A U S E S.

PREVIOUS to our explaining, or entering on the method of cure, it will be proper to trace the causes of measles, as the indications which are to be given ought naturally to be founded on the knowledge of them.

There are certain states or conditions of the human body, which render it unsusceptible to the attack of the small-pox, measles, &c. after having once received the infection: what these states, or changes induced in the animal œconomy are, we know not; but the fact is self-evident.

The body at any age, if it has not previously laboured under the measles, &c. is most generally ever after predisposed to its attack: this predisposition probably consists,

sists, first, in the patient's never having had the fluids assimilated by the action of this ferment,* as a phlogistic diathesis, together with all those causes that may debilitate the body, either directly or indirectly, as cold, fear, anxiety, and fatigue.

The OCCASIONAL CAUSE,

I believe, will be acknowledged to consist in a *specific contagion*. How the contagious matter is received, has been an object of much inquiry; but it can answer little purpose to enter here upon a discussion of this subject, whether it arises by contact with diseased persons, from absorption through the pores of the skin, or in respiration by the lungs. The latter of these opinions, however, I am induced to believe, happens more frequently than the former, as the stimulus of the contagion is insufficient to rouse the extreme vessels of the skin into action, which has been proved by the application of variolous matter to an arm for twenty-four hours, without being followed by the disease.†

The infection is then received by breathing the surrounding air alone; yet how these morbid particles are generated, I cannot explain, without insurmountable objections: we shall, therefore, from its known effects, receive it as a matter of fact, that the atmosphere does often become the receptacle of certain noxious matters,‡
that,

* CULLEN, DXCVII.

† See Medical Enquiries by Doctor RUSH.

‡ A locis pessimi acris, ab aquis vitiosis atque etiamne dormiant sub-umbra nucis juglandis, ne que sub taxo, aut sub pino, aut sub buxo arbore. Ær quidem juxta hasce arbores instar veneni ledit. Vide PROSPER ALPINUS, p. 201.

that, when applied to the human body, do certainly produce diseases of particular kinds and violence. Thus, the effects of marsh effluvia in producing intermitting fevers; putrid effluvia from animal matters, as the cause of low fevers; the breath of persons labouring under small-pox, or the perspirable matter surrounding their bodies inducing the variolus fever: In short, we might go on almost without end in enumerating instances.

PROXIMATE CAUSE.

UNDER this head, we find the opinions of medical gentlemen much divided; however, from facts which in the course of our Dissertation we mean to advance, it is hoped, that the proximate cause of the measles will be demonstrated to exist in the blood. Some suppose the proximate cause to be in the contagion; others, that of a particular diathesis; and some, that of a ferment. That the fluids of the body become assimilated by this ferment, is proved from inoculation in this disease, with a greater degree of certainty than in that of the small-pox.* If this is true, as it evidently appears from Doctor HOME's ingenious and useful experiments, the fanciful theory of Doctor MILMAN, on the non-existence of diseases in the blood, must fall to the ground, and the *visionary hypotheses*, as he is pleased to call them by way of ridicule, in many instances will not only exist, but continue *sound theories*;† and the vitiated or diseased state

* Vide HOME's Medical Facts.

† Preface to MILMAN on Scurvy.

state of the blood will not be found to reside wholly in the supposed nature of the *matter*, though we are not capable of ascertaining, from the difficulty of the subject, the precise alteration thus induced, it probably being of too subtle a nature ever to be investigated so far as to remove every objection that may be advanced.

The constituent parts of the blood being thus assimilated, in a degree, to the nature of the poison, form the *proximate cause* of this disease; that is, during the act of the fermentative process; by which operation the contagious matter becomes generated in a greater or lesser degree, agreeable to the habit or constitution of the patient. The contagious particles stimulate the whole system, and produce the fever; and, as it is only the finer parts of our fluids that are thrown off by perspiration, the more gross and acrid particles are retained, and stimulate the mouths of the excretory ducts; which occasions the primary inflammation that occurs in every pimple, in the same manner as is observed by Doctor WALKER, in his elaborate treatise on the small-pox.

D I A G N O S I S.

TO distinguish one disease from another is absolutely necessary, by marking out accurately those symptoms that occur, and which might possibly deceive the judgment to the injury of the patient. In every dubious
ease,

case, the appearances which compose our diagnosis will be readily distinguished, by attending to the following circumstances:---

From the scarlet fever, by its being free from cough or any catarrhal symptom.* A soreness of the throat in the scarlatina, at an early period, and its eruptions are more diffused, of a brighter colour, and not so eminent as the measles.† The eruptions appear generally more in patches, of a bright red, and spread so much as to unite, and render the skin entirely covered.

From miliary fever. The miliary fever most frequently happens to lying-in women. The hot stage is attended with great anxiety and sighing: the heat of the body being great, soon produces sweating, preceded by a sense of pricking in the skin; the perspirable matter possessing a particularly disagreeable odour.‡

From catarrh it is known by the hoarseness and dry cough constantly attendant on morbilious fever, together with the affection of the eyes and sneezing. An attention to the prevailing epidemic will always afford considerable assistance in forming a just distinction.

The disease with which the incipient symptoms of measles might be blended, and disappoint our judgment, is that of the *small-pox*. But here also, the stages are well marked by the flow of tears from the eyes, occasioned by inflammation or debility; frequent sneezing, as if the person had caught cold, with a hoarse, dry cough;

* CULLEN, DCLVI.

† The pimples in measles have somewhat the appearance of flea-bites.

‡ CULLEN'S Outlines, DCCXV.

cough; all of which precede the attack of measles, *and never* that of variolus fever: further, by the pimples not rising sufficiently eminent to be noticed by the eye, nor forming pustles, but ending in scales, which naturally peal off.

The eruptions attendant on the variolus fever, on the contrary, run into suppuration, and all its concomitant symptoms abate; but here they are mostly increased.

P R O G N O S I S.

IN forming a just prognostication of the future event of a disease, it is highly proper that we deliberately reflect upon the past appearance of the symptoms, with the patient's constitution previous to its being diseased, the present affections, and the seasons of the year: these will enable us to form a better judgment. It has been observed by SYDENHAM, that measles for the most part are of a simple inflammatory kind, seldom or ever attended with any danger, if carefully treated. This remark is probably too general, as we find that it frequently proves fatal, though treated, in all its stages, by the most diligent physicians.*

The event may be pronounced favourable, in proportion as the eruptive fever has gone through its course with more or less regularity; the catarrhal affection not aggravated, but gradually growing less troublesome; the

C
bowels

* Vide WATSON's Observ. HOME, &c.

bowels unaffected with great and frequent discharges. Copious evacuations from the bladder, and gentle perspiration on the surface of the whole body, are all desirable marks.

When the eruption is advancing slowly, attended with restlessness, anxiety, convulsion or epileptic fits, the most imminent danger may be apprehended. Profuse hæmorrhages are always to be dreaded.*

Our prognosis in the malignant kind, is to be drawn, first, from the debility induced. If there is a great prostration of strength, colliquative sweats, diarrhœa, dyspnoea, restlessness, great anxiety, with distressing cough and extreme difficulty in breathing, much is to be feared. Doctor HOME remarks, that a certain impending death may be suspected, when the eruptions turn suddenly of a livid hue, or strike in with delirium. Difficult deglutition, corrosive ulcers in the throat, pains of the head, great dread of light from soreness of the eyes---these, with sudden diminution of strength, followed by diarrhœa and griping, coldness of the extremities, and hæmorrhages, with certainty presage the event.

GENERAL OBSERVATIONS.

THE measles are frequently succeeded by very troublesome and dangerous symptoms; for, as Doctor CULLEN observes, it is not uncommon, even when they have been

* Vide Principia. Med. Oper. HOFFMAN.

been of a mild kind, to find them followed by various inflammatory affections, particularly *ophthalmia* and *phthisis*. HOFFMAN likewise mentions particular affections: but the most remarkable is that of *gutta serena*. In short, I believe there is scarce a disease, either of an inflammatory or debilitated kind, but what has sometimes been known to ensue soon after the measles, though affections of the breast and abdominal viscera are most frequent. When we come to our method of cure, we shall note the means best calculated to obviate these particular sequela.

We shall now examine the propriety of what has been said on the measles, as combined with other fevers. It has been mentioned by some physicians of eminence, that measles have been complicated with small-pox, in such a manner, that both the eruptions have appeared at one and the same time, producing very alarming symptoms. With great deference to the judgment of such gentlemen as relate these phænomena, we must beg leave to doubt the possibility of truth in such narrations, since we think it can be proved by substantial arguments, that such actions in the human body are not only inconsistent with reason, but incompatible with the principles of morbid action on the animal œconomy. It will, I believe, be granted, that the matter generating small-pox, is specifically different from that which creates measles, as is known from the effects; consequently, we assume it as a matter of fact, that no two inflammatory fevers of a contagious kind can exist in the same body at the same time. Let us allow for a moment, that a person should be inoculated with a lancet armed with the contagious
fluid

fluid of each disease ; what might we expect ? Should we see diagnostic marks of each, and find the specific eruption appear ? Most certainly not, because no system could possibly withstand such a violent conflict. Therefore, as the constitution is susceptible of but one action in a part at a time, such an inoculation would probably induce one or other of the diseases, and after it had gone through its febrile course, the other might likely ensue. It will be unnecessary to say any thing respecting local complaints preceding, or attendant on the fever ; for, as Mr. HUNTER observes, a man may have the pox and small-pox at the same time ; that is, parts of the body may have been contaminated by the venereal poison, and the small-pox may take place, and both diseases thus appear together, but not in the same parts ; the one being a local disease, the other an idiopathic fever, as we have before noticed.

We will endeavour to illustrate this principle further, by relating one of the many cases that occurred under Mr. HUNTER's own observation.

“ On Thursday, the 16th of March, 1775, I inoculated a gentleman's child, in whose arms it was observed I made large punctures. On the Sunday following, he appeared to have received the infection ; a small inflammation or redness appearing round each puncture, and a small tumor above the surface of the skin having been observed. On the twentieth, and on the twenty-first, the child was feverish ; but I declared that the fever was not variolus, as the inflammation had not advanced since the nineteenth. On the twenty-second, a considerable
eruption

eruption appeared, which was evidently the measles; upon this the sores on the arm appeared to go back, becoming less inflamed. On the twenty-third, he was very full of the measles; the punctures on the arms being in the same state as on the preceding day. On the twenty-fifth, the measles began to disappear. On the twenty-sixth and twenty-seventh, the punctures began again to look a little red. On the twenty-ninth, the inflammation increased, and there was a little matter formed. On the thirtieth, he was seized with fever. The small-pox appeared at the regular time, went through its usual course, and terminated favourably."

Further, I think it very probable that the different periods after inoculation, before the approach of the eruptive fever, can with propriety be accounted for upon no other basis, than that of some antecedent affection and peculiarity of constitution. There are many instances on record, wherein the eruptive fever has not made its appearance for fourteen or even twenty days after the introduction of variolus ferment: this, then, can be accounted for on no other principle than the afore-mentioned. Mr. HUNTER asks it as a question, Does not the cure of some diseases depend upon the same principle? The suspension, or cure of a gonorrhœa, by a fever, may be an instance of this kind. As an additional strength to what we have advanced, I consider the observations of the late learned Professor, Doctor ALEXANDER MONRO, of Edinburgh, who relates some instances of measles and small-pox being succeeded by each

each other.* As a matter of perhaps little present utility, more than as a singular circumstance, we wish to observe, with those who entertain an idea that diseases may be communicated to the fœtus in utero, that we cannot avoid thinking it somewhat probable, from considering its nourishment in that state, together with the following case, sent to Doctor DUNCAN, and related by him in the thirteenth volume of his Commentaries:† Two or three days after the delivery of a child, the physician was called to give his opinion concerning an eruption which had now made its appearance on several parts of its body, to the no small alarm of the parents; he pronounced the eruption to be that of the small-pox, which afterwards fully proved the propriety of his judgment, for the pox maturated kindly, in the usual manner of an easy distinct small-pox. The author of the above history concludes by informing us, that the grand-mother of the said child, who was upwards of sixty (in good health) says, that she was born with the small-pox. These observations from a gentleman on whose veracity confidence may justly be placed, tend unquestionably to prove, and overturn every prejudice that can prevail against the idea of diseases being communicated from the mother to the fœtus in utero.

* See MONRO's, sen. Works, p. 698.

† Vol. xiii. p. 318.

APPEARANCES

APPEARANCES ON DISSECTION.

THOSE who die in measles, particularly children, generally receive their death by a great flux of serum to the lungs, which produces suffocation; in others, a hectic fever ensues, with swelling of the abdomen, which terminating fatally, we discover, upon dissection, an enlargement of the mesenteric glands, and latent vomicæ in the lungs.* The best information we can derive on this head, is from the papers of the judicious Doctor WATSON, who observes that few died in the first stage of the malignant measles, several on the two or three first days of the second, and more between the second and third weeks: yet there were a few who remained so much debilitated as to die in more than a month after the first attack. In one who died of a dysenteric evacuation, there was discovered a mortification of the rectum: in six others, one or more parts of the body were found sphacelated. It is remarkable, that the girls who died, most usually became mortified in the *pudendum*: two who had ulcers in the mouth and cheeks, became so corroded by them, that the cheeks, from the internal ulcers, sphacelated externally before they died: one of these had the gum and jaw-bone so much destroyed by the corrosive matter, that most of the teeth, on that side, dropt out before death.

The

* HOFFMAN loco citato. Lond. Med. Observ. Art. xv. vol. iv.

The bronchial tubes were found but little charged with *mucus*, even in those who died under difficult respiration, and at some length of time after the eruption and fever had subsided. The pulmonary vessels were preternaturally distended and obstructed; the whole substance of the lungs being very tender. In a girl who died on the nineteenth day, the *pleura* was seen strongly to adhere in many places; an incipient sphacelation of the left lobe, with a distention of the lungs; part of the jejunum much inflamed, containing many worms. Lastly, he remarks in another who died suddenly at the end of three weeks, when his complaints were apparently no worse, that his breathing had all along been difficult, with colliquative purging a few days before his death; that he had complained much of a sharp pain under the left *scapula*. Upon opening the *thorax*, the blood vessels of the lungs were found much enlarged, and a *sphacelus* of considerable extent in the left lobe: this, by corroding the blood vessels, occasioned an *hæmorrhage*, which nearly filled the left cavity of the breast. The sphacelated part of the lungs contained a considerable quantity of a putrid, dark-coloured, highly offensive *sanies*.

Thus we have concisely delivered a detail of those appearances which came under the observation of that accurate philosopher, Doctor WATSON, whose name we have already mentioned with great satisfaction.

METHOD

METHOD OF CURE.

OUR success in the cure of diseases depends on our knowledge of their proximate causes; but as it often happens that this information cannot be obtained, our indications, therefore, must be drawn from the most urgent symptoms.

- I. *To remove the phlogistic diathesis.*
- II. *The alleviation of troublesome catarrhal symptoms.*
- III. *To obviate the effects of debility, and tendency of the fluids to putrefaction.*
- IV. *To prevent the bad effects which often ensue.*

I. The first consideration is *to remove the phlogistic diathesis*. The most efficacious manner of answering this purpose, will be,

- 1st. By diminishing the action of the heart and arteries,
- 2d. By the use of calomel and opium; and,
- 3d. By strict adherence to the antiphlogistic plan.

For answering this indication, we of course must notice blood-letting. The utility of this remedy in diminishing the quantity of blood, and reducing the tone of the sanguiferous system, is sufficiently obvious: however, there are few objections that can be raised to its free use in the incipient stages, if we take for our direction the following circumstances: *---

- 1st. The nature of the prevailing epidemic.

D

2d. The

2d. The season and climate in which the disease occurs.

3d. The degree of phlogistic diathesis present.

4th. The period of the disease.

5th. The age, vigour, and plethoric state of the patient.

6th. The effects of the blood-letting that may have been already practised.

It will be proper to consider whether, from the appearance of the epidemic, it has or has not a malignant aspect; if it should, the lancet must be cautiously used, particularly as the measles advance, and we have reason to expect great debility to follow: on the contrary, if we have not these apprehensions, it may be called into our aid with more freedom, always keeping in mind its effects, and the degree of phlogistic diathesis present. Urgent symptoms of the pneumonic kind may probably require frequent bleeding; but this must be judged from the age and vigour of the patient, as it is observed that children bear these evacuations but indifferently.

Mercury and opium. Though there may appear a kind of inconsistency in my classing, as a means of taking off the phlogistic diathesis, the use of *calomel* and *opium*, instead of *cathartics* and *emetics*, I am induced to do it, not only from analogical reasoning from its utility as a specific in the *endemic diseases of India*, but from the *solid basis of the experience* of an eminent physician in Scotland, who has proved its success in almost every inflammatory affection that occurred in an extensive practice of nearly eighteen years.

I shall

I shall submit the explanatory part of its operation on the body to some gentleman who may be more capable of obviating those objections which arise in the mind, and confine myself to facts.

It may be worthy remarking, that this remedy met with the countenance of that learned character, Sir JOHN PRINGLE. DOCTOR HAMILTON, in his letter to DOCTOR DUNCAN,* observes, that he was induced to give this medicine a fair trial, from reasoning, by analogy, on its good effects in hepatitis, after some blood, as the case might require, being taken away.† From this, he was led to try it in a case of peripneumony; “For,” says he, “its liberal use in inoculation, in the modern way, had borne testimony of its power in abating inflammation.” In the case of pneumonia, he was astonished by its success, as well as in many other instances of the same kind under a great variety of circumstances; particularly in women far advanced in pregnancy, who were snatched from the jaws of death after every other means had failed to relieve them.

It has also been attended with the happiest effects in a vast number of other cases, consisting of *phrenitis* and *paraphrenitis*, inflammations of the intestines and other parts within the abdomen, *child-bed fevers* with high inflammatory symptoms, and inflammatory angina. DOCTOR HAMILTON also expressly says, that he has known many
a life

* Medical Commentaries, vol. ix. p. 191.

† It is unnecessary to say any thing respecting the use of mercury in either the acute or chronic hepatitis; for in India it is a remedy esteemed as a specific with as much confidence as the Peruvian bark in intermittents.

a life saved in the symptomatic, variolous, and morbillous peripneumony. From such an extensive practice then, as fell to the share of this gentleman, and such a length of time, may we not conclude, that, after bleeding and evacuating the contents of the stomach and bowels, we may, with safety and advantage, administer opium with calomel to our patients, with a view of relieving the affections of the breast? I think we may, and ought to embrace the opportunity to prevent those dangerous symptoms that might otherwise arise.

The proportion of opium and calomel must be regulated according to the *age* of the patient: the composition may be agreeable to Doctor HAMILTON's method, viz. from five to one grain of calomel; and from one to one-fourth grain of opium, and a dose given every six, eight or twelve hours, as the urgency of the symptoms may require. It has been observed, that by the use of some weak and warm diluent while taking three or four doses, the inflammation commonly gave way: but if no relief was obtained (which was rarely the case) the bleeding was repeated and followed again by the medicine, till the disease resolved by sweating or purging, or more commonly by both, or by a ptyalism being raised.

If the fever was high, a little emetic tartar and camphor were added. He further observes, that he never found any medicine whatever with the last addition so certainly, speedily and effectually produce a relaxation of the surface, and plentifully discharge from its pores, with the advantage of increasing the evacuations by stool and urine: "From which," says he, "it would appear
that

that the glandular secretions, in general, are most essentially promoted by this composition." In the malignant kind, this promises to be a very serviceable remedy, as patients under those situations will not admit of bleeding in any great degree:* the lancet, therefore, had better be laid aside, to give place to more efficacious means.

Antiphlogistic regimen. The antiphlogistic plan, in the *first species of disease*, is highly necessary, from the most obvious causes. It is not requisite to introduce every particular, more than that the patient should be kept as much as possible from animal diet, and liberally supplied with vegetables: his drink should consist of tepid fluids, prepared chiefly from farinaceous matters. The free enjoyment of temperate air will always be beneficial; but not so free an exposure as in small-pox, unless the disease happens to be of the malignant kind, which most frequently occurs in moderate weather, when repeated changes of fresh cool air become essentially requisite. The air of a sick chamber, when warmed to about sixty-eight degrees of FAHRENHEIT's thermometer, will be found most comfortable and pleasant: if colder, it would probably have a tendency to increase the catarrhal affection with the pain of the breast.

II. *The alleviation of troublesome catarrhal symptoms.*

The catarrhal affections often prove distressing from the beginning of the fever. To relieve these symptoms, nothing seems better calculated than the constant use of calomel and opium. This medicine, by its action on
the

* London Medical Observations.

the glands of the mouth and fauces, effectually promotes a plentiful secretion of the mucus, by which it affords a speedy relief in dry, obstinate catarrhus coughs, particularly when persisted in until the mouth becomes affected by it: at the same time, the use of mucilagenous drinks will be serviceable, as they sheath the parts.

If the catarrh is unattended with any other symptom, would not the Peruvian bark and wine accelerate the cure?

III. Our third indication is *to obviate the effects of debility, and tendency of the fluids to putrefaction.*

To answer this intention, the patient must be indulged with a more liberal diet, such as broths, jellies, and the like, with a moderate use of wine diluted. In the malignant kind, the griping, colliquative stools may be immediately relieved by occasional clysters of thin mutton broth, with a few drops of laudanum. The sick chamber ought to be kept well ventilated, and of a comfortable temperature; the patient's clothes frequently changed, and every thing removed that may in the least offend the organs of smelling.

The patient's diet here should consist of the most easy of digestion, and such things as are applicable, as antiseptics, accompanied with the free introduction of bland liquids gratefully acidulated. Perhaps the Peruvian bark would not here be followed by those disagreeable affections usually ascribed to it, if the calomel and opium be carefully given at the same time, under such restrictions as observation alone can dictate.

IV. *To prevent the bad effects of measles.*

This very important indication is probably of as much consequence to mankind, as any subject that can be drawn from the science of Medicine.

As a means the most promising to release our fellow creatures from that dreadful train of diseases to which they are exposed after the measles, I think we may, from analogy, urge the practice of inoculation with full as much propriety, if not more than ever was done in the small-pox. It is presumed unnecessary to enter upon a discussion, in this place, of the advantages or disadvantages attendant on inoculation for the small-pox, as the business has long since been introduced into general practice, and the benefits arising therefrom are self-evident to mankind.

Doctor MONRO, in his account of the small-pox in Scotland, in the year 1764, introduces a table of inoculation, wherein we see the number of deaths that happened to 5726 persons, to be only 72: the number of deaths when the infection was received by the natural way, was universally acknowledged to be much greater. Since, then, by the experience and industry of that humane man, Doctor HOME, of Edinburgh, we are informed that this disease can be propagated by inoculation, I am fully of opinion, that I shall render mankind some service if I can be in any degree a means of introducing inoculation for measles into general practice, and overturn those prejudices that have been entertained against it by physicians.

I shall

I shall take the liberty of relating a few of those experiments that have been made on this subject, which are most worthy of note in this place, referring the reader, for further satisfaction, to the work from which they are taken; and then draw some general conclusions.

EXPERIMENT I.*

“ March 21st. A child of seven months old, with a scabby head, running behind the ears, and an eruption over its body for three months, but otherwise healthy, was inoculated by the blood taken from a measly child two days before. This was not the fittest subject that I would have chosen to begin with, but no other could be got. We had an opportunity of seeing the mildness of the disease, and of its effects on these eruptions.

“ 27th. The child was a little hot all last night, and had sneezed often this morning. The tongue was white, and eyes watery. The wound on the right arm was dried up, but that on the left was running plentifully. There was no inflammation on either.

“ 28th. Was hot and restless last night. Continued to sneeze, but no cough.

“ 29th. Observed three pustules on the face, and one on the back, of a very florid colour. Still sneezes. Coughed thrice this night. Hot and restless last night.

“ 30th. About a dozen out, and of a very florid colour. Sneezing less. No sore eyes. Child very cheerful.

“ April

* These experiments were made in the year 1758. See HOME's Medical Facts and Experiments.

“ April 1st. A few more measles are come out, and larger than the former, which were now beginning to dry. Sneezed a little, but no cough. A little restless during the night.

“ 2d. Still sneezing. Coughed three times. A little restless in the night, but quite cool all the day. A few more out in the face, the former gone.

“ 3d. Spots still out. The scabs on the head, and running behind the ears dried up. 4th. Measles going off.

“ This child has been free of all eruptions ever since.”

EXPERIMENT II.

“ This, and the following experiment, was made on two sisters, who had a cough all winter; but were otherwise florid and healthy. The blood was taken the day before, so that the cotton was yet moist. They were inoculated April 20th.

“ The eldest, about six years, turned hot, thirsty, a little feverish, with a white tongue, and diminished appetite the next day after she was inoculated. I am apt to think that this was rather owing to fear from the incisions, or to cold, than to the nature of the disease, as I never have seen the matter affect others so soon.

“ 27th. Hot and restless in the night. Sneezes. Has had a looseness last night. No appetite. Tongue white. Thirsty. Pain in the back part of her head.

“ 28th. Much the same, but purging gone. A great quantity of water comes out of her eyes, so that she wets many cloths in a day. Her eyes cannot bear the smallest light, but not in the least inflamed.

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“ 30th.

" 30th. Has had the measles out since yesterday. Pulse quite calm. A great quantity still of sharp humour from her eyes. No appetite.

" May 1st. Her eyes less weak, and the running diminished. Measles out.

" 2d. Eyes well, and the measles gone."

EXPERIMENT III.

" The youngest was three years old, and began, April 27th, to be hot in the night, and to sneeze.

" 28th. Started sometimes last night. Cool and easy through the day. Tongue white.

" 29th. Not hot last night; but sneezes sometimes.

" 30th. Some measles out. Not hot, and no cough. Tongue white.

" May 1st. Not quite so easy as yesterday.

" 2d. Measles pretty large. More drought.

" 3d. They were still to be seen out, but disappeared next day."

EXPERIMENT IV.

" A sister of the two former, aged eight years, was inoculated May 3d, with the same blood, now 14 days old, but carefully kept in a glass. 10th. Somewhat uneasy to-day. 11th. Pain in her head. Pulse very little affected. Running at her eyes, but no inflammation. Loss of appetite, and drought. Sneezes much, and coughs a very little. 12th. Much the same. Some spots have appeared. 13th. About two dozen out. Hot, and sneezes. 15th. All the measles gone. This child was out all the day in the open air, till the day of eruption."

It will not be worth while to relate any more cases, as those we have already transcribed are sufficient to answer the object in view. It remains only to observe, that Doctor HOME has clearly proved the propriety of communicating the measles to children of every age after this manner; and that a little blood taken from one of the red spots contains an ample quantity of the morbillious matter to propagate the disease.

The eruptive fever, in the inoculated measles, commonly happens about the sixth day, when the patient feels its effects in the night only. The stages occur at more stated periods than in the small-pox. The alarming symptoms that often occur in the natural way, as the cough, violent fever, sore eyes, pneumonia, or hectic, have never been known to ensue upon inoculation: hence it follows, that this disease, like the small-pox, becomes mitigated in its violence by inoculation. The running of the eyes and sneezing are as strong in the artificial as in the natural species; but, *that often dangerous attendant, the cough, almost entirely disappears.* The crisis of the artificial, like the natural, shews itself by purging.

From all these circumstances, noticed on the authority of Doctor HOME, we are decidedly of opinion, that it would be a great blessing to society to render the practice of *inoculation in measles general*; since, in fact, the benefits that result from this operation are equal to what can be expected in the small-pox. I would therefore recommend the practice, as the most powerful means of obviating the common consequences of measles.

In cases where persons labour under the disease naturally, they are often troubled, for a considerable length of time, by pains in the breast, with short, dry coughing. I should here, as in the regular stages of the disease, recommend bleeding, in proportion as the patient may find relief thereby, with the use of calomel, opium and tartar emetic combined, to promote expectoration, and remove any remaining phlogistic diathesis.

For the treatment of all the diseases that may be considered as the result of measles, I refer to those writers to whose province it may belong.

If the advice here given be seasonably adopted, it is presumed the consequences related will seldom, if ever, be met with in the practice of our profession.

NOTHING further remains, but that, on this occasion, I return my grateful thanks to those gentlemen who have aided me in the different branches of my education, and in particular to those medical characters, in the city of New-York, to whose friendship I feel myself peculiarly indebted; and among whom, I am pleased in having it in my power to enumerate the names of DOCTORS ROMAYNE, MOORE, MITCHILL, and R. KISSAM.---To DOCTOR SAMUEL BARD, Dean of the Faculty of Physic in Columbia College, who, during three years spent under his instruction, manifested towards me the *kindest* and *most friendly* attention, I am happy *on this*, as I shall be *on all other occasions*, to testify my *warmest* acknowledgments.

THE END.

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